<u>AMENDMENTS TO THE CLAIMS:</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-9 (canceled).

10 (new): A method of localization of one or more sources, each source being in motion relative to a network of sensors, the method comprising the steps of separating the sources in order to identify the direction vectors associated with the response of the sensors to a source having a given incidence, associating direction vectors $\mathbf{a}_{1m}...\mathbf{a}_{Km}$ obtained for the mth transmitter and respectively at the instants $t_1...t_K$, localizing the mth transmitter from the associated vectors $\mathbf{a}_{1m}...\mathbf{a}_{Km}$.

11. (new): The method according to claim 10, wherein associating step comprises:

Step ASE – 1 : Initialization of the process at k=2.

Step ASE – 2 : For $1 \leq m \leq M$ determining the indices $i(m)$ in using the relationship $d(a_{km}, b_{i(m)}) = \min_{1 \leq i \leq M} [d(a_{km}, b_i)]$, the vector $a_{k,m}$ and the vectors b_i identified at the instant t_{k+1} for $(1 \leq i \leq M)$, setting up a function $\beta_m(t_k) = d(a_{km}, a_{om})$,

Step ASE – 3 : For $1 \leq m \leq M$ performing the operation $a_{k+1\,m} = b_{i(m)}$,

Step ASE – 4 : Incrementing $k \leftarrow k+1$ and if $k < K$ returning to the step ASE-1,

Step ASE – 5 : Starting from the family of instants $\Phi = \{ t_1 < ... < t_K \}$ thus obtained, extracting the instants t_i which do not belong to a zone defined by the curve $\beta_m(t_k)$ and a zone of tolerance.

12 (new): The method according to claim 10, wherein the localizaing step comprises:

a normalized vector correlation $L_K(x,y,z)$ maximizing in the space (x,y,z) of the position of a transmitter with

$$L_K(x,y,z)= \frac{\left| \mathbf{b}_K^{H} \mathbf{v}_K(x,y,z) \right|^2}{\left(\mathbf{b}_K^{H} \mathbf{b}_K \right)\left(\mathbf{v}_K(x,y,z)^H \mathbf{v}_K(x,y,z) \right)}$$

with

$$\mathbf{b}_K = \begin{bmatrix} \mathbf{b}_{1m} \\ \vdots \\ \mathbf{b}_{Km} \end{bmatrix} = \mathbf{v}_K(x_m,y_m,z_m) + \mathbf{w}_K \ , \quad \mathbf{v}_K(x,y,z) = \begin{bmatrix} \mathbf{b}(t_1,x,y,z) \\ \vdots \\ \mathbf{b}(t_K,x,y,z) \end{bmatrix}$$

and $\mathbf{w}_K = \begin{bmatrix} \mathbf{w}_{1m} \\ \vdots \\ \mathbf{w}_{Km} \end{bmatrix}$

where $\mathbf{w}_K$ is the noise vector for all the positions (x, y, z) of a transmitter.

13. (new): The method according to claim 12, wherein the vector b_K comprises a vector representing the noise, the components of which are functions of the components of the vectors $a_{1m} \ldots a_{Km}$.

14. (new): The method according to claim 12,wherein comprising:

a step in which the matrix of covariance $R=E[w_K\, w_K^H]$ of the noise vector is determined and in that the following criterion is maximized :

$$L_K'(x,y,z)= \frac{\left| \mathbf{b}_K^{H} \mathbf{R}^{-1} \mathbf{v}_K(x,y,z) \right|^2}{\left(\mathbf{b}_K^{H} \mathbf{R}^{-1} \mathbf{b}_K \right)\left(\mathbf{v}_K(x,y,z)^H \mathbf{R}^{-1} \mathbf{v}_K(x,y,z) \right)}$$

15 (new): Method according to claim 14, wherein the evaluation of the criterion $L_K(x,y,z)$ and/or of the criterion $L_K'(x,y,z)$ is recursive.

16 (new): The method according to claim 14, wherein it comprises a step of comparison of the maximum values with a threshold value.

17 (new): The method according to claim 11, wherein the value of K is initially fixed at K_0.

18 (new): The method according to claim 10, wherein the transmitters to be localized are mobile and in that the vector considered is parameterized by the position of the transmitter to be localized and the speed vector.